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20 January 2014

Mr. Brian Mueller
Task Order Monitor
U.S. Environmental Protection Agency (EPA) Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

RE: Technical Memorandum on Barge Dock Facility Closure Report
Falcon Refinery Superfund Site
Remedial Investigation/Feasibility Study
EPA Region 6 Remedial Action Contract 2
Contract: EP-W-06-004
Task Order: 0088-RICO-06MC

Dear Mr. Mueller:

EA Engineering, Science, and Technology, Inc. (EA) is enclosing one electronic copy of the Technical Memorandum of our review of the Barge Dock Facility Closure Report for the above-referenced Task Order to EPA.

If you have any questions regarding this submittal, please call me at (972) 315-3922.

Sincerely,

Robert M. Owens
Project Manager

RMO/

Enclosure

cc: Michael Pheeny, EPA Contracting Officer (letter only)
Rena McClurg, EPA Project Officer (letter only)
Tim Startz, EA Program Manager (letter only)
File

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TRANSMITTAL OF DOCUMENTS FOR ACCEPTANCE BY EPA		DATE: 20 February 2014	TRANSMITTAL NO.: **0012**
TO: **Mr. Brian Mueller** **U.S. Environmental Protection Agency (EPA) Region 6**		FROM: **Mr. Robert Owens** **EA Engineering, Science, and Technology, Inc.**	
SUBTASK NO.	DELIVERABLE		NO. OF COPIES
3.7	Technical Memorandum - Review of Barge Dock Facility Closure Report Falcon Refinery Superfund Site Remedial Investigation/Feasibility Study		EPA - 1 hard copy
ACCEPTANCE ACTION			
DOCUMENTS FOUND ACCEPTABLE (LIST BY SUBTASK NO.)		NAME/TITLE/SIGNATURE OF REVIEWER DATE	

Technical Memorandum
Review of
Barge Dock Facility Closure Report

Remedial Investigation/Feasibility Study
Falcon Refinery Superfund Site
Ingleside, San Patricio County, Texas
EPA Identification No. TXD086278058

Remedial Action Contract 2 Full Service
Contract: EP-W-006-004
Task Order: 0088-RICO-06MC

Prepared for

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Prepared by

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February 2014
Revision: 00
EA Project No. 1434288

1.0 INTRODUCTION

TRC Environmental Corporation (TRC) prepared a Barge Dock Facility Closure Report on behalf of the potentially responsible party (PRP), Lazarus Texas Refining I, LLC (Lazarus), for the Falcon Refinery Superfund Site (Site) located in Ingleside, Texas. National Oil Recovery Corporation (NORCO) entered into the Administrative Order as a PRP on Consent for Remedial Investigation, Comprehensive Environmental Response, Compensation, and Liability Act Docket No. 06-05-04 for the site. During 2012, NORCO sold the former Falcon Refinery to Lazarus. Since the sale Lazarus has been operating the former refinery as a crude oil bulk storage and transfer facility. According to the Closure Report, Lazarus will be able to obtain a "bridge loan" until additional permanent funding can be secured by obtaining a notice of no further action at the barge dock facility. Lazarus has indicated that the bridge loan will lead to employment expansion and allow further finance development of the site including additional remedial actions and upgrades to the site.

Overall, EA Engineering, Science and Technology, Inc. (EA) agrees that it is reasonable to evaluate and possibly close the barge dock facility independent of the remainder of the Site based on the site conditions and contaminants encountered. It is suggested that additional rationale and justification be provided to support the closure conclusions presented in the report.

2.0 SITE SUMMARY

The Site is located 1.7 miles southeast of State Highway 361 on FM 2725 at the north and south corners of the intersection of FM 2725 and Bishop Road near the city of Ingleside in San Patricio County, Texas. The Site occupies approximately 104 acres and consists of a refinery that operates intermittently and is currently inactive, except for a crude oil storage operation being conducted by Superior Crude Gathering, Inc. (Superior). When in operation the refinery had a capacity of 40,000 barrels per day, and the primary products consisted of naphtha, jet fuel, kerosene, diesel, and fuel oil. The refinery also historically transferred and stored vinyl acetate, a substance not excluded under the petroleum exclusion.

The barge dock facility is located on approximately 0.5 acres on the Redfish Bay and the Intra-Costal waterway. The facility is secured by a fence and contains the necessary structures and equipment to load and unload barges. It is not contiguous with the main portion of the refinery and was previously connected to the storage tanks of the refinery via pipelines.

The Phase 1 investigation of the Site identified seven areas of concern (AOCs). The barge dock facility is identified as AOC-4 and the waterway adjacent to it is identified as AOC-5.

3.0 TECHNICAL REVIEW COMMENTS

The following technical review comments are associated with the Barge Dock Facility Closure Report.

1. Information pertaining to the operational history, recorded releases, and potentially affected media for AOC-1, AOC-2, AOC-3, AOC-6 and AOC-7 were not evaluated and comments on them are not provided as part of this review.

2. The operational history of AOC-4 states that only refined products and crude oil have been loaded and unloaded at the barge dock facility. This seems to indicate that only products covered under the petroleum exclusion have been handled at the barge dock facility. However, documentation cites that the refinery also historically transferred and stored vinyl acetate, a substance not excluded under the petroleum exclusion. Although the handling of vinyl acetate at the barge dock facility may not change the conclusions reached in this report, this inconsistency needs to be explained further in the closure report.

3. The report proposes to evaluate and close the barge dock facility (AOC-4) independently from the remaining portions of the Site. The rationale provided in the report for evaluating AOC-4 separately from the remainder of the Site is reasonable except as noted for AOC-5 in the following comment.

4. The argument for not including the analytical data from the Intracoastal Waterway (AOC-5) into the barge dock facility closure consideration needs to be expanded. The closure report states that this data was not evaluated because of the "significant quantity of barge and industrial traffic in the intracoastal waterway. Any detections of COPC in the sediment or surface water in this AOC could be the result of numerous entities that are located on the waterway or transport materials on the waterway." The possibility of other contributors to the contaminants at a Superfund site is not sufficient rationale to exclude those contaminants from consideration. EA agrees that AOC-4 can be evaluated and possibly closed independent of AOC-5, but additional justification should be provided. An example of such justification includes the following:

    a. The soils at the barge dock facility do not serve as a source area for Redfish Bay.

    b. Surface water and ground water at the barge dock facility serve as minimal possible sources for Redfish Bay.

    c. The human health exposure to the surface water/sediment near the barge dock facility within the bay are not dependent on the use of the barge dock facility, meaning a receptor is expected to contact the Redfish Bay independently of the barge dock facility. Therefore, any human health risks assessed for the Redfish Bay would not be cumulative results with the risks within the barge dock facility AOC. It is expected that the highest exposure for a human to the Redfish Bay would most likely be from fish consumption and not surface water/sediment contact which would further separate the bay from the barge dock facility. In an instance such as this, it is reasonable to evaluate the water body (AOC-5) as an individual exposure area separate from AOC-4.

d. The ecological receptors are completely different in AOC-4 (terrestrial) and AOC-5 (aquatic). Evaluation of risks to the AOC-4 receptors is independent of the evaluation of risks to the AOC-5 receptors.

5. The extent of discussion about ecological risk at the barge dock facility is limited and should be expanded. Two potential contaminants of concern (mercury and zinc) exceeded their Texas Commission on Environmental Quality (TCEQ) Exposure Point Concentrations. No further discussion is included in the report to rationalize the suggested overestimation of ecological exposure and risk. The document suggests that the barge dock facility represents minimal viable ecological habitat. More information on the ecological habitat and populations should be included. A general conclusion should be added that states that risks to the populations of plants and invertebrates at AOC 4 are acceptable due to minimal habitat and limited exceedances of Texas ecological screening values.

6. TPH in soils was not evaluated because the individual chemicals that compose the TPH mixture are included in the analysis. The TPH mixture usually contains other chemicals that are not assessed in the individual chemical analysis. Based upon the results presented in Table 1, only one sample location, EXC-1, was analyzed for TPH concentrations. The location of this sample is not included on any of the figures. The TPH results for EXC-1 are significantly higher than the volatile organic compound concentrations detected in this sample. TCEQ has set forth human health screening levels for TPH, which should be used. Include a discussion in the uncertainty section about the lack of TPH data and its potential effects on human health risks at AOC 4.

7. The risk evaluation should include a stronger argument about not assessing the ground water pathway. It appears, based upon the AOC location, that ground water is most likely brackish and not fit for human consumption. However, additional justification should be provided. Just stating ground water is brackish is not sufficient to eliminate this potential exposure pathway.

8. Some of the screening concentrations for the residential and commercial/industrial in Table 1 are switched. For instance, the residential Regional Screening Levels (RSLs) for inorganics are higher than the commercial/industrial RSLs. Additionally, the RSLs for chemicals with a non-cancer endpoint should be based upon an Hazard Quotient of 0.1, not 1 as shown in Table 1.

9. Sample results are shown for samples SR-West_5, EXC-1, FRA-133A, and FRA-135, collected in 2007. However, these sample locations are not shown on any of the figures.

10. Sample locations G-57S through G-61S, collected in 2007, are shown on Figures 4 and 5. However, the sample results for these sample locations are not included on Table 1.